

S/N 09/945,535

PATENT

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Applicant: Kie Y. Ahn et al.

Examiner: David S. Blum

Serial No.: 09/945,535

Group Art Unit: 2813

Filed: August 30, 2001

Docket: 1303.026US1

Title: HIGHLY RELIABLE AMORPHOUS HIGH-K GATE OXIDE ZrO<sub>2</sub>

**SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT**

MS RCE

Commissioner for Patents

P.O. Box 1450

Alexandria, VA 22313-1450

In compliance with the duty imposed by 37 C.F.R. § 1.56, and in accordance with 37 C.F.R. §§ 1.97 *et. seq.*, the enclosed materials are brought to the attention of the Examiner for consideration in connection with the above-identified patent application. Applicants respectfully request that this Supplemental Information Disclosure Statement be entered and the documents listed on the attached Form 1449 be considered by the Examiner and made of record. Pursuant to the provisions of MPEP 609, Applicants request that a copy of the 1449 form, initialed as being considered by the Examiner, be returned to the Applicants with the next official communication.

Pursuant to 37 C.F.R. §1.97(b), it is believed that no fee or statement is required with the Supplemental Information Disclosure Statement. However, if an Office Action on the merits has been mailed, the Commissioner is hereby authorized to charge the required fees to Deposit Account No. 19-0743 in order to have this Supplemental Information Disclosure Statement considered.

## SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT

Serial No :09/945,535

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The Examiner is invited to contact the Applicants' Representative at the below-listed telephone number if there are any questions regarding this communication.

Pursuant to 37 C.F.R. 1.98(a)(2), Applicant believes that copies of cited U.S. Patents and Published Applications are no longer required to be provided to the Office. Notification of this change was provided in the United States Patent and Trademark Office OG Notices dated October 12, 2004. Thus, Applicant has not included copies of any US Patents or Published Applications cited with this submission. Should the Office require copies to be provided, Applicant respectfully requests that notice of such requirement be directed to Applicant's below-signed representative. Applicant acknowledges the requirement to submit copies of foreign patent documents and non-patent literature in accordance with 37 C.F.R. 1.98(a)(2).

Respectfully submitted,

KIE Y. AHN ET AL.

By their Representatives,

SCHWEGMAN, LUNDBERG, WOESSNER & KLUTH, P.A.  
P.O. Box 2938  
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508-865-8211

Date 2/09/05

By David Suhl  
David Suhl  
Reg. No. 43,169

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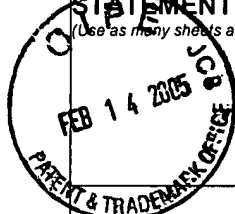
KACIA LEE

Signature

Kacia Lee

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**INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT**  
(Use as many sheets as necessary)



Complete if Known

Application Number	09/945,535
Filing Date	August 30, 2001
First Named Inventor	Ahn, Kie
Group Art Unit	2813
Examiner Name	Blum, David

Sheet 1 of 1

Attorney Docket No: 1303.026US1

**US PATENT DOCUMENTS**

Examiner Initial *	USP Document Number	Publication Date	Name of Patentee or Applicant of cited Document	Filing Date If Appropriate
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**OTHER DOCUMENTS -- NON PATENT LITERATURE DOCUMENTS**

Examiner Initials*	Cite No <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>
		HOSHINO, Y. , et al., "Characterization and Control of the HfO2/Si(001) Interfaces", <u>Applied Physics Letters</u> , 81, (Sep. 30, 2002), 2650-2652	
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**EXAMINER**

**DATE CONSIDERED**

Substitute Disclosure Statement Form (PTO-1449)

\* EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.<sup>1</sup> Applicant's unique citation designation number (optional) <sup>2</sup> Applicant is to place a check mark here if English language Translation is attached



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PATENT

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Group Art Unit: 2813

Filed: August 30, 2001

Docket: 1303.026US1

Title: HIGHLY RELIABLE AMORPHOUS HIGH-K GATE OXIDE ZRO2

COMMUNICATION CONCERNING RELATED APPLICATION(S)

Mail Stop RCE  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Applicants would like to bring to the Examiner's attention the following related application(s) in the above-identified patent application:

<u>Serial/Patent No.</u>	<u>Filing Date</u>	<u>Attorney Docket</u>	<u>Title</u>
11/036296	January 14, 2005	1303.030US2	LOW-TEMPERATURE GROWN HIGH QUALITY ULTRA-THIN CoTiO3 GATE DIELECTRICS
10/930138	August 31, 2004	1303.044US2	EVAPORATION OF Y-Si-O FILMS FOR MEDIUM-k DIELECTRICS
10/930184	August 31, 2004	1303.021US2	CRYSTALLINE OR AMORPHOUS MEDIUM-K GATE OXIDES, Y2O3 AND GD2O3
10/930516	August 31, 2004	1303.078US2	ATOMIC LAYER DEPOSITED HfSiON DIELECTRIC FILMS
10/931341	August 31, 2004	1303.082US2	ATOMIC LAYER DEPOSITED ZR-SN-TI-O FILMS USING TiH4
10/930431	August 31, 2004	1303.056US2	ATOMIC LAYER-DEPOSITED HfAlO3 FILMS FOR GATE DIELECTRICS
10/931365	August 31, 2004	1303.059US2	Pr2O3-BASED La-oxide GATE DIELECTRICS
10/931364	August 31, 2004	1303.069US2	LANTHANIDE DOPED TiOx DIELECTRIC FILMS BY PLASMA OXIDATION

## COMMUNICATION CONCERNING RELATED APPLICATIONS

Serial Number: 09/945,535

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Title: HIGHLY RELIABLE AMORPHOUS HIGH-K GATE OXIDE ZrO2

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10/931343	August 31, 2004	1303.101US2	LANTHANIDE OXIDE / HAFNIUM OXIDE DIELECTRIC LAYERS
10/931340	August 31, 2004	1303.107US2	LANTHANIDE OXIDE / HAFNIUM OXIDE DIELECTRICS
10/931356	August 31, 2004	1303.026US2	HIGHLY RELIABLE AMORPHOUS HIGH-K GATE OXIDE ZrO2
11/031289	January 7, 2005	1303.069US3	LANTHANIDE DOPED TiOx DIELECTRIC FILMS BY PLASMA OXIDATION

Respectfully submitted,

KIE Y. AHN ET AL.

By Applicants' Representatives,

SCHWEGMAN, LUNDBERG, WOESSNER & KLUTH, P.A.  
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KACIA LEE  
Name

Kacia Lee  
Signature

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# INFORMATION DISCLOSURE STATEMENT BY APPLICANT

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Application Number 09/945535  
Filing Date August 30, 2001  
First Named Inventor Ahn, Kie  
Group Art Unit 2813  
Examiner Name Blum, David

Attorney Docket No: 1303.026US1

## US PATENT DOCUMENTS

Examiner Initial *	USP Document Number	Publication Date	Name of Patentee or Applicant of cited Document	Class	Subclass	Filing Date If Appropriate
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	US-2002/0155688	10/24/2002	Ahn, K. Y., et al.	438	592	04/20/2001
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## FOREIGN PATENT DOCUMENTS

Examiner Initials*	Foreign Document No	Publication Date	Name of Patentee or Applicant of cited Document	Class	Subclass	T <sup>2</sup>
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## OTHER DOCUMENTS -- NON PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>
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Substitute for form 1449A/PTO <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> (Use as many sheets as necessary)	Complete if Known	
	Application Number	09/945535
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	First Named Inventor	Ahn, Kie
	Group Art Unit	2813
	Examiner Name	Blum, David
Sheet 2 of 3	Attorney Docket No: 1303.026US1	

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**INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT**

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<b>Application Number</b>	09/945535
<b>Filing Date</b>	August 30, 2001
<b>First Named Inventor</b>	Ahn, Kie
<b>Group Art Unit</b>	2813
<b>Examiner Name</b>	Blum, David

Sheet 3 of 3

Attorney Docket No: 1303.026US1

**OTHER DOCUMENTS -- NON PATENT LITERATURE DOCUMENTS**

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\* EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 809. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. <sup>1</sup> Applicant's unique citation designation number (optional) <sup>2</sup> Applicant is to place a check mark here if English language Translation is attached



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<b>Examiner Name</b>	Blum, David

Sheet 1 of 8

Attorney Docket No: 1303.026US1

**US PATENT DOCUMENTS**

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First Named Inventor	Ahn, Kie
Group Art Unit	2813
Examiner Name	Blum, David

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Application Number	09/945535
Filing Date	August 30, 2001
First Named Inventor	Ahn, Kie
Group Art Unit	2813
Examiner Name	Blum, David

Sheet 1 of 1

Attorney Docket No: 1303.026US1

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	US-2002/0146916	10/10/2002	Irino, Kiyoshi, et al.	438	785	03/29/2002
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## **OTHER DOCUMENTS -- NON PATENT LITERATURE DOCUMENTS**

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	Application Number	09/945,535
	Filing Date	August 30, 2001
	First Named Inventor	Ahn, Kie
	Group Art Unit	2813
	Examiner Name	Blum, David
Sheet 1 of 4	Attorney Docket No: 1303.026US1	

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**Application Number** 09/945,535

**Filing Date** August 30, 2001

**First Named Inventor** Ahn, Kie

**Group Art Unit** 2813

**Examiner Name** Blum, David

Sheet 2 of 4

**Attorney Docket No:** 1303.026US1

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	Filing Date	August 30, 2001
	First Named Inventor	Ahn, Kie
	Group Art Unit	2813
	Examiner Name	Blum, David
Sheet 3 of 4	Attorney Docket No: 1303.026US1	

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Attorney Docket No: 1303.026US1

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